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DEPARTMENT OF BUILDING INSPECTION

CAPSS: COMMUNITY ACTION PLAN FOR SEISMIC SAFETY

FALL 2001

The Community Action Plan for Seismic Safety (CAPSS) is an extensive research and public outreach program to prepare San Francisco's buildings and communities for the next big earthquake. CAPSS is studying how the City's natural, built, economic, and social structures will be affected by a major earthquake. CAPSS will work to design programs that protect the community and [illegible] *such as retrofit requirements and incentives, post earthquake response and repair, public* [illegible]*pe of CAPSS includes City-owned and privately owned buildings, but does not include schools or* [illegible]*clude in 2003 with a series of recommendations to the City and to the public.*

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REFERENCE BOOK

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[illegible]n Francisco: One of the most seismically [illegible]ctive regions in the United States

San Francisco lies in one of the most seismically active regions in the United States, between two historically active faults, the San Andreas and the Hayward. The Hayward fault produced a large earthquake in 1868, which caused damage in San Francisco. The 1906 earthquake on the San Andreas fault was one of the largest earthquakes of the 20th century. This earthquake caused the largest urban fire in U.S. history and resulted in the destruction of a large part of the City. Following that disaster and until the 1970s, building codes did not sufficiently address earthquake structural resistance.

In 1989, the relatively small Loma Prieta earthquake caused damage and business interruption with estimates that reached as high as $10 billion. In the Bay Area, over 60 people died, at least 3,700 people were reported injured and over 12,000 were displaced. More than 18,000 homes were damaged and 963 were destroyed. Over 2,500 other buildings were damaged and 147 were destroyed.

On the basis of research conducted since the Loma Prieta earthquake, the U.S. Geological Survey (USGS) and other scientists conclude that there is a 70% probability of a large earthquake striking the San Francisco Bay Area in the next 30 years (USGS, 1999). USGS research emphasizes the urgency that all communities continue to prepare for earthquakes.

and populations most vulnerable to impacts, what actions or programs could best mitigate such impacts?

- ***What are appropriate criteria for repair and retrofit of earthquake-damaged buildings?***

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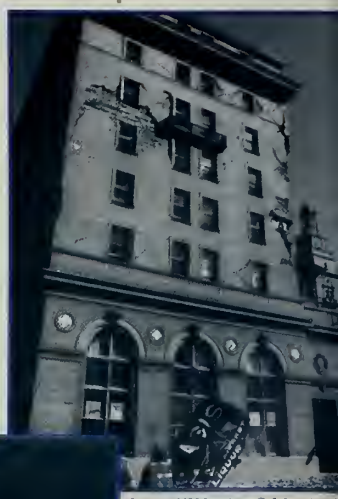
San Francisco Faces Unique Challenges

San Francisco's location and diverse urban character present a number of unique seismic safety challenges. The Community Action Plan for Seismic Safety (CAPSS) will provide a better understanding of earthquake risks facing San Francisco by investigating the following:

- The large number of highly vulnerable wood-frame corner and soft-story buildings;
- The concentration of low or moderate income and multi-family housing in buildings susceptible to damage;
- The significant areas of unengineered fill that will liquefy and cause ground displacement;
- The large concentration of culturally valuable buildings, in some cases comprising whole neighborhoods (South Park, North Beach);
- Public safety concerns such as façade attachments in older buildings;
- The special needs of vulnerable populations (disabled persons, single parents, and seniors);
- The need for post-earthquake rebuilding standards. The current planning code does not fully address required levels of repair and strengthening based on extent of damage, particularly considering historic buildings and economic characteristics; and
- Post-earthquake fire and the need to examine fire spread factors in San Francisco.



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Critical information for policymakers and the public to consider

KEY ISSUES	CRITICAL INFORMATION
Impact Assessment	Quantify and address: • Building types and vulnerabilities • Potential casualties • Projected building damage and loss • Special needs groups • Historical and cultural assets • Post earthquake housing displacement • Socio-economic factors • Post earthquake fires
Identification and Definition of Seismic Hazard Mitigation Programs	Identify, rank and define additional programs by: • Conducting public outreach to assist building owners and the City to identify and implement seismic risk reduction. • Developing pre-earthquake retrofit incentives. • Developing phased programs to reduce seismic hazards in buildings. • Identifying populations and commercial activities located in buildings likely to require repairs following a major earthquake, and where repair requirements would be financially difficult.
Formulation of Earthquake Damage Evaluation Standards and Repair Criteria and Requirements	Develop recommendations for post-earthquake repair/strengthening standards by: • Assessing alternative structural repair policy options • Recommending an overall repair/strengthening policy • Developing specific repair/strengthening guidelines for prevalent building types • Recommending changes to the San Francisco Building Code

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Key Questions to Consider

The following are key policy questions to be evaluated in the Community Action Plan for Seismic Safety (CAPSS):

- What is the size of the problem in San Francisco, given the soils and the built environment? What types of structures are at risk and/or most important to protect?
- Who are the vulnerable populations (seniors, disabled, low income), and where do they live? What are the cultural issues?
- What are the key factors to maintaining affordable housing after an earthquake?
- How should costs be allocated?
- What are the guidelines for repairs? To what level should damaged buildings be upgraded?
- What are the best ways to increase public information to achieve significant seismic risk reduction?

CAPSS will be seeking public input and dialogue on these important questions (see "Opportunities for Public Input" back page).

Courtesy of EQE International

Partnering for Success

San Francisco's Department of Building Inspection is leading the Community Action Plan for Seismic Safety (CAPSS) program. CAPSS is being developed by the Applied Technology Council (ATC), a professional non-profit corporation founded to protect life and property through the application of science and engineering. ATC is joined in this effort by a team of other consultants.

CAPSS will also be guided by a group of volunteer specialists, stakeholders, and community representatives. This group will bring a wide range of perspectives and input to the CAPSS process and will include representatives from some of the following departments/associations/interest areas:

General Interests/Expertise

- Building owners
- Insurance brokers
- Contractors
- Disabled community members
- General public members
- Historians
- Lenders
- Merchants
- Organized labor
- Real estate brokers
- Religious leaders
- Structural engineers
- Tenant advocates

Neighborhoods/Business Interests

- Association of San Francisco Neighborhoods
- Neighborhood Groups
- Non-Profit Housing Developer
- San Francisco Apartment Owners Association
- San Francisco Architectural Heritage
- San Francisco Planning and Urban Research Association
- Small Business Commission
- Tenderloin Neighborhood Development Corporation

Government Agencies

- Association of Bay Area Governments (ABAG)
- Federal Emergency Management Agency (FEMA, Region 9)
- San Francisco City Architect
- San Francisco Fire Department
- San Francisco Planning Department
- San Francisco Risk Management
- Seismic Safety Commission
- Senator Dianne Feinstein's Office
- U.S. Geological Survey

Opportunities for Public Input

Opportunities for public input will be provided as the CAPSS project proceeds and will include public meetings, neighborhood presentations, and community round tables. A variety of public involvement activities will be incorporated as well, such as stakeholder interviews, elected official briefings, and newsletters.

For more information

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Schedule

Technical work for CAPSS will be completed in approximately two years, concluding by the end of 2003. Public input will be sought throughout the study.

CAPSS recommendations will ultimately be presented to the Building Inspection Commission and Board of Supervisors of the City and County of San Francisco for review and consideration.

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